

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A network application decentralized execution system, comprising:

a network application server storing an application execution script for a concentrated switched network ~~prepared~~, the application execution script allowing communication between terminal equipments through an exchange; and

two or more terminal equipments connected to said server and capable of downloading the application execution script from said server,

each said terminal equipment including a connection state variation detection means ~~means~~ section (114) for detecting a variation of a connection state of said terminal equipment, a connection state control means ~~means~~ section (115) for controlling the connection state of said terminal equipment in response to the detected connection state, and an application plug-in means ~~means~~ section (117) for plugging in the application execution script selected and downloaded (S7) from said network application server to the terminal equipment so that the downloaded application execution script ~~can be~~ is executed between the two terminal equipments without intervention of any exchange, wherein,

said connection state variation detection ~~means~~ section and said connection state control ~~means~~ section operate in accordance with the ~~plug-in~~ downloaded application execution script plugged-into the application plug-in section, and

the state variation detection section supervises a connection event designated by the application execution script and includes each of a connection of a call being completed, the connection of the call coming to an end, a call destination being busy during a call connection attempt, and a geographic position of a connected terminal equipment changing.

2. (currently amended) A network application decentralized execution system as claimed in claim 1, further comprising a database, and wherein said plug-in ~~means~~ section, by executing the application execution script selected and downloaded from the network application server, records a telephone connection time between said first and second terminal equipment into said database, the telephone connection time indicating a length of the time said first and second terminal equipment were in a connected state.

3. (currently amended) A network application decentralized execution system which allows application of a network application developed for a concentrated switched network to a decentralized switched network, comprising:

a network application server; and

a first terminal equipment;

a second terminal equipment;

said network application server including

an application storage section (101) for storing application execution scripts for a concentrated switched network server, the stored application execution scripts available for downloading to the first and second terminal equipment,

a subscriber information storage section (102) for storing download information identifying which individual ones of the stored application execution scripts the terminal equipment having equipments have downloaded from the network application server, ~~individual ones of the stored application execution scripts,~~ the first terminal equipment being a subscriber identified in the subscriber information storage section as having a first application execution script downloaded from said network application server, the first application execution script being a network application to establish bi-directional communications between the first and second terminal equipment,

a subscriber/application information management section (103) for managing said application storage section and said subscriber information storage section, and

a data transmission/reception section (104) for exchanging data with said first terminal equipment;

said first terminal equipment including
an application storage section (117) for storing the
first application execution script downloaded from said network
application server,

an application control section (113) for executing the
first application execution script stored in said application
storage section,

a state variation detection section (114) for
supervising an event designated by the first application
execution script and issuing, if the event occurs, a notification
of the occurrence of the event to said application control
section in order to establish the bi-directional communication
between the first and second terminal equipment without
intervention of any exchange,

a call state storage section (118) for storing a call
state of said first terminal equipment and for storing a call
state of the second terminal equipment when the first terminal
equipment is engaging in establishing the bi-directional
communication with the second terminal equipment,

a connection state control section (115) for managing
said call state storage section, and

a data transmission/reception section (116) for
exchanging data with the terminal equipment of the other party
and said network application server,

the first application execution script downloaded from said network application server, being an application execution script for allowing communication between terminal equipments through an exchange in a concentrated switched network.

4. (original) A network application decentralized execution system as claimed in claim 3, wherein said application control section includes and uses an application programming interface for a concentrated switched network to control said call state storage section and said connection state control section.

5. (previously presented) A network application decentralized execution system as claimed in claim 4, wherein said application control section has, as a function of the application programming interface, a function of detecting an event concerning a change in a communication connection status of said second terminal equipment and issuing a notification of the occurrence of the event to the first application execution script.

6. (previously presented) A network application decentralized execution system as claimed in claim 4, wherein said application control section has, as a function of the application programming interface, a function of causing the

application execution script to place said first terminal equipment into a connection state and a communication state with said second terminal equipment.

7. (previously presented) A network application decentralized execution system as claimed in claim 4, wherein said application control section has, as a function of the application programming interface, a function of causing the first application execution script to control the connection state of said first terminal equipment.

8. (previously presented) A network application decentralized execution system as claimed in claim 4, wherein said application control section has, as a function of the application programming interface, a function of causing the first application execution script to interact with a user through said first terminal equipment.

9. (previously presented) A network application decentralized execution system as claimed in claim 4, wherein said application control section has, as a function of the application programming interface, a function of causing the first application execution script to access said network application server.

10. (previously presented) A network application decentralized execution system as claimed in claim 4, wherein said application control section has, as a function of the application programming interface, a function of causing the first application execution script to call a process of a concentrated server.

11. (previously presented) A network application decentralized execution system as claimed in claim 4, wherein said application control section has, as a function of the application programming interface, a function of ending an execution state of the first application execution script.

12. (previously presented) A network application as claimed in claim 3, further comprising:

a database connected to said first terminal equipment;
said database being connected to said data transmission/reception section of said first terminal equipment.

13. (original) A network application decentralized execution system as claimed in claim 12, wherein said application control section includes and uses an application programming interface for a concentrated switched network to control said call state storage section and said connection state control

section.

14. (previously presented) A network application decentralized execution system as claimed in claim 13, wherein said application control section has, as a function of the application programming interface, a function of detecting an event and issuing a notification of the occurrence of the event to the first application execution script.

15. (previously presented) A network application decentralized execution system as claimed in claim 13, wherein said application control section has, as a function of the application programming interface, a function of causing the first application execution script to place said first terminal equipment into a connection state and a communication state.

16. (previously presented) A network application decentralized execution system as claimed in claim 13, wherein said application control section has, as a function of the application programming interface, a function of causing the first application execution script to control the connection state of said first terminal equipment.

17. (previously presented) A network application decentralized execution system as claimed in claim 13, wherein

said application control section has, as a function of the application programming interface, a function of causing the first application execution script to interact with a user through said first terminal equipment.

18. (previously presented) A network application decentralized execution system as claimed in claim 13, wherein said application control section has, as a function of the application programming interface, a function of causing the first application execution script to access said network application server.

19. (previously presented) A network application decentralized execution system as claimed in claim 13, wherein said application control section has, as a function of the application programming interface, a function of causing the first application execution script to call a process of a concentrated server.

20. (cancelled)

21. (previously presented) A network application decentralized execution system as claimed in claim 12, wherein said application control section writes into said database, by executing the first application execution script, a period of

time to record a connection time between said first and second terminal equipment into said database, the connection time indicating a length of the time said first and second terminal equipment were in a connected communication state.

22. (currently amended) A terminal equipment which cooperates with a network application server to form a network application decentralized execution system which allows application of a network application developed for a concentrated switched network to a decentralized switched network, comprising:

connection state variation detection means for detecting a variation of a connection state of said terminal equipment with another terminal equipment including detecting a busy condition of the another terminal equipment while originating a telephone call to the another terminal equipment;

connection state control means for controlling the connection state of said terminal equipment with the another terminal equipment, including re-originating the telephone call automatically using a trigger that the busy condition of the another terminal equipment has come to an end; and

plug-in means for plugging in an application execution script downloaded from said network application server, the application execution script being a network application to establish bi-directional communications between said terminal equipment and the another terminal equipment.

23. (previously presented) A terminal equipment which cooperates with a network application server to form a network application decentralized execution system which allows application of a network application developed for a concentrated switched network to a decentralized switched network, comprising:

an application storage section for storing the application execution script downloaded from said network application server;

an application control section for executing the application execution script stored in said application storage section;

a state variation detection section for supervising an event designated by the application execution script and issuing, if the event occurs, a notification of the occurrence of the event to said application control section in order to establish bi-directional communication between the terminal equipment and another terminal equipment;

a call state storage section for storing a call state of said terminal equipment and the another terminal equipment when the terminal equipment is engaged in establishing the communication between with the another terminal equipment;

a connection state control section for managing said call state storage section; and

a data transmission/reception section for exchanging data with the terminal equipment of the other party and said network application server.

24. (original) A terminal equipment as claimed in claim 23, wherein said application control section includes and uses an application programming interface for a concentrated switched network to control said call state storage section and said connection state control section.

25. (original) A terminal equipment as claimed in claim 24, wherein the application programming interface has a function of detecting an event and issuing a notification of the occurrence of the event to the application execution script.

26. (original) A terminal equipment as claimed in claim 24, wherein the application programming interface has a function of causing the application execution script to place said terminal equipment into a connection state and a communication state.

27. (original) A terminal equipment as claimed in claim 24, wherein the application programming interface has a function of causing the application execution script to control the connection state of said terminal equipment.

28. (original) A terminal equipment as claimed in claim 24, wherein the application programming interface has a function of causing the application execution script to interact with a user through said terminal equipment.

29. (original) A terminal equipment as claimed in claim 24, wherein the application programming interface has a function of causing the application execution script to access said network application server.

30. (original) A terminal equipment as claimed in claim 24, wherein the application programming interface has a function of causing the application execution script to call a process of a concentrated server.

31. (original) A terminal equipment as claimed in claim 24, wherein the application programming interface has a function of ending an execution state of the application execution script.

32. (previously presented) A terminal equipment which cooperates with a network application server and a database to form a network application decentralized execution system which allows application of a network application developed for a concentrated switched network to a decentralized switched network, comprising:

an application storage section for storing the application execution script downloaded from said network application server;

an application control section for executing application execution script and managing said application storage section;

a state variation detection section for supervising an event designated by the application execution script and issuing, if the event occurs, a notification of the occurrence of the event to said application control section in order to establish communications between the terminal equipment and another terminal equipment;

a call state storage section for storing a call state of said terminal equipment and the another terminal equipment of the communication;

a connection state control section for managing said call state storage section; and

a data transmission/reception section connected to said database for exchanging data with the terminal equipment of the other party and said network application server,

the application execution script being a network application to establish bi-directional communications between the terminal equipment and the another terminal equipment.

33. (original) A terminal equipment as claimed in 32, wherein said application control section includes and uses an application programming interface for a concentrated switched network to control said call state storage section and said connection state control section.

34. (original) A terminal equipment as claimed in claim 32, wherein the application programming interface has a function of detecting an event and issuing a notification of the occurrence of the event to the application execution script.

35. (original) A terminal equipment as claimed in claim 32, wherein the application programming interface has a function of causing the application execution script to place said terminal equipment into a connection state and a communication state.

36. (original) A terminal equipment as claimed in claim 32, wherein the application programming interface has a function of causing the application execution script to control the connection state of said terminal equipment.

37. (original) A terminal equipment as claimed in claim 32, wherein the application programming interface has a function

of causing the application execution script to interact with a user through said terminal equipment.

38. (original) A terminal equipment as claimed in claim 32, wherein the application programming interface has a function of causing the application execution script to access said network application server.

39. (original) A terminal equipment as claimed in claim 32, wherein the application programming interface has a function of causing the application execution script to call a process of a concentrated server.

40. (original) A terminal equipment as claimed in claim 32, wherein the application programming interface has a function of ending an execution state of the application execution script.

41. (previously presented) A terminal equipment as claimed in claim 32, wherein said application control section writes a period of time within which the application execution script is executed into said database.

42. (previously presented) An execution method of a network application for a network application decentralized execution system which includes a network application server and

a terminal equipment and allows application of a network application developed for a concentrated switched network to a decentralized switched network, comprising:

a first step of detecting a variation of a connection state between said network application server and said terminal equipment;

a second step of controlling the connection state in response to the variation detected by the first step; and

a third step of for plugging in an application execution script downloaded from said network application server, the application execution script providing for monitoring a time period of communication connection between said terminal equipment and another terminal equipment.

43. (original) An execution method of a network application as claimed in claim 42, further comprising a step of recording time for which the application execution script is executed.

44. (previously presented) An execution method of a network application for a network application decentralized execution system which includes a network application server and a terminal equipment and allows application of a network application developed for a concentrated switched network to a decentralized switched network, comprising:

a first step of downloading the network application from said network application server into said terminal equipment;

a second step of setting a first trigger for starting up the network application, downloaded from said network application server to said terminal equipment, to said terminal equipment, the first trigger being a change in a monitored communication connection status at another terminal equipment that said terminal equipment is seeking to establish communications with;

a third step of starting up the network application when the first trigger is fired; and

a fourth step of ending the execution of the network application when a particular operation is performed.

45. (original) An execution method of a network application as claimed in claim 44, further comprising a step of setting a second trigger for starting up a next operation when the first trigger is fired.

46. (original) An execution method of a network application as claimed in claim 44, further comprising a step of setting an N+1th trigger for starting up a next operation when an Nth trigger is fired, N being a positive integer greater than 1.

47. (previously presented) An execution method of a network application as claimed in claim 44, wherein the first step includes the steps of:

using, when power supply to said terminal equipment is switched on, the switching on of the power supply as a trigger to start up a network application for allowing selection from among services which can be used by said terminal equipment;

transmitting subscriber identification information from said terminal equipment to said network application server;

preparing a list of network applications which can be used by a user of said terminal equipment based on the subscriber identification information by said network application server and transmitting the list from said network application server to said terminal equipment;

selecting one of the network applications from within the list by the user of said terminal equipment; and

downloading the selected network application from said network application server to said terminal equipment,

said selected network application providing an automatic call-back function from said terminal equipment to the another terminal equipment upon receiving a notification from the another terminal equipment of the changing a communication state from a busy state to a not-busy state.

48. (original) An execution method of a network application as claimed in claim 44, further comprising a step of storing the network application downloaded from said network application server into said terminal equipment.

49. (original) An execution method of a network application as claimed in claim 44, further comprising a step of issuing, when the first trigger is fired, before the network application is started up, an inquiry from said terminal equipment to a user of said terminal equipment regarding whether or not the network application may be started up.

50. (original) An execution method of a network application as claimed in claim 45, further comprising a step of issuing, when the first trigger is fired, before the network application is started up, an inquiry from said terminal equipment to a user of said terminal equipment regarding whether or not the network application may be started up, and wherein the second trigger is set only when the user consents to starting up of the network application.

51. (original) An execution method of a network application as claimed in claim 46, further comprising a step of issuing, when the first trigger is fired, before the network application is started up, an inquiry from said terminal

equipment to a user of said terminal equipment regarding whether or not the network application may be started up, and wherein the second to N+1th triggers are set only when the user consents to starting up of the network application.

52. (original) An execution method of a network application as claimed in claim 44, further comprising a step of recording time for which the network application is executed.

53. (previously presented) An operation method for a terminal equipment which cooperates with a network application server to form a network application decentralized execution system which allows application of a network application developed for a concentrated switched network to a decentralized switched network, comprising:

a first step of detecting a variation of a connection state between said terminal equipment and said network application server;

a second step of controlling the connection state in response to the variation detected by the first step; and

a third step of plugging in an application execution script downloaded from said network application server, the application execution script providing for monitoring a time period of communication connection between said terminal equipment and another terminal equipment.

54. (original) An operation method for a terminal equipment as claimed in claim 53, further comprising a step of recording time for which the application execution script is executed.

55. (previously presented) An operation method for a terminal equipment which cooperates with a network application server to form a network application decentralized execution system which allows application of a network application developed for a concentrated switched network to a decentralized switched network, comprising:

a first step of downloading the network application from said network application server into said terminal equipment;

a second step of setting a first trigger for starting up the network application, downloaded to said terminal equipment from said network application server, to said terminal equipment, the first trigger being a change in a monitored communication connection status at another terminal equipment that said terminal equipment is seeking to establish communications with;

a third step of starting up the network application when the first trigger is fired; and

a fourth step of ending the execution of the network application when a desired operation is performed.

56. (original) An operation method for a terminal equipment as claimed in claim 55, further comprising a step of setting a second trigger for starting up a next operation when the first trigger is fired.

57. (original) An operation method for a terminal equipment as claimed in claim 55, further comprising a step of setting an N+1th trigger for starting up a next operation when an Nth trigger is fired, N being a positive integer greater than 1.

58. (original) An operation method for a terminal equipment as claimed in claim 55, wherein the first step includes the steps executed by said terminal equipment of:

using, when power supply to said terminal equipment is switched on, the switching on of the power supply as a trigger to start up a network application for allowing selection from among services which can be used by said terminal equipment;

transmitting subscriber identification information to said network application server;

receiving a list of network applications which can be used by a user of said terminal equipment prepared based on the subscriber identification information by and transmitted from said network application server; and

downloading one of the network applications of the list selected by a user of said terminal equipment from said network application server.

59. (original) An operation method for a terminal equipment as claimed in claim 55, further comprising a step of storing the network application downloaded from said network application server into said terminal equipment.

60. (original) An operation method for a terminal equipment as claimed in claim 55, further comprising a step of issuing, when the first trigger is fired, before the network application is started up, an inquiry to a user of said terminal equipment regarding whether or not the network application may be started up.

61. (original) An operation method for a terminal equipment as claimed in claim 56, further comprising a step of issuing, when the first trigger is fired, before the network application is started up, an inquiry from said terminal equipment to a user of said terminal equipment regarding whether or not the network application may be started up, and wherein the second trigger is set only when the user consents to starting up of the network application.

62. (original) An operation method for a terminal equipment as claimed in claim 57, further comprising a step of issuing, when the first trigger is fired, before the network application is started up, an inquiry from said terminal equipment to a user of said terminal equipment regarding whether or not the network application may be started up, and wherein the second to N+1th triggers are set only when the user consents to starting up of the network application.

63. (original) An operation method for a terminal equipment as claimed in claim 55, further comprising a step of recording time for which the network application is executed.

64. (previously presented) A network application decentralized execution system, comprising:

an application server located on a public network;

first and second terminal equipment connected to the application server, the first terminal equipment being a telephone call calling party, the second terminal equipment being a called party of the telephone call; and

network telephone applications hosted on the application server and available for download to the first and second terminal equipment,

a first of the telephone network applications being an automatic call back service application that, when downloaded

from the application server and installed in the first terminal equipment, provides a service re-originating a telephone call from the calling party to the called party after an original telephone call to the called party results in receiving, at the calling party, a busy notification from the called party signifying the called party is involved in another telephone conversation,

the automatic call back service application being automatically started using a trigger activated in response to the calling party receiving, from the called party, an end-of-call notification that the another telephone conversion of the called party has ended,

the first terminal equipment comprising

i) a plug-in means for plugging in the automatic call back service application after selection and downloaded by the first terminal equipment from said application server,

ii) connection state variation detection means for detecting a variation of a connection state of the called party based on receipt of the end-of-call notification, and

iii) connection state control means for controlling the connection state of the calling party with the called party, the connection state control means being activated by the automatic call back service application responding to the trigger.

65. (previously presented) A network application decentralized execution system which allows application of a network application developed for a concentrated switched network to a decentralized switched network, comprising:

a network application server hosting plural available telephone application execution scripts for downloading to terminal equipment; and

a first terminal equipment comprising

i) an inputting apparatus (110) operable by a user of the first terminal equipment to select, for downloading (S6), a telephone application execution script from a list, provided by the network application server to the first terminal equipment, of the plural available telephone application scripts,

ii) plug-in means for plugging in the application execution script selected and downloaded (S7) from said network application server,

iii) connection state variation detection means (114) for detecting a variation of a telephone connection state of a second terminal equipment based on a response message sent from the second terminal equipment to the first terminal equipment, the response message being sent responsive to an initial message from the first terminal equipment to the second terminal equipment, and

iv) connection state control means (115) for controlling the connection state of said first terminal equipment

with the second terminal equipment based on the response message sent from the second terminal equipment to the first terminal equipment.